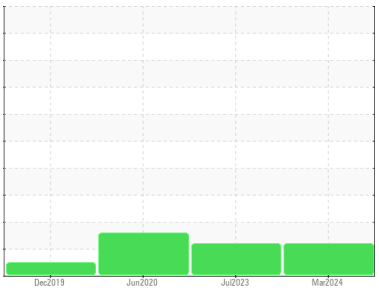
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
Fwd Machinery Space [450296544]
Machine Id
Thruster Fwd Aft - Lower Gearbox (S/N Sample Tag CL-06004- S6)
Component
Lube System
Fluid
GEAR OIL ISO 150 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0081680**	PC	PC
Sample Date		Client Info		**31 Mar 2024**	24 Jul 2023	07 Jun 2020
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**0**	<1	2
Chromium	ppm	ASTM D5185(m)	>10	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**0**	0	0
Copper	ppm	ASTM D5185(m)	>20	**0**	0	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	**15**	15	<1
Barium	ppm	ASTM D5185(m)	15	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	15	**0**	0	<1
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	50	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**6**	3	4
Phosphorus	ppm	ASTM D5185(m)	350	**166**	172	294
Zinc	ppm	ASTM D5185(m)	100	**5**	4	14
Sulfur	ppm	ASTM D5185(m)	12500	**8255**	9509	11372
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**1**	2	<1
Sodium	ppm	ASTM D5185(m)		**<1**	<1	1
Potassium	ppm	ASTM D5185(m)	>20	**0**	<1	<1

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ **15348**	▲ 10149	▲ 28159
Particles >6µm	ASTM D7647	>1300	● **2227**	● 2355	▲ 7700
Particles >14µm	ASTM D7647	>160	**93**	92	▲ 385
Particles >21µm	ASTM D7647	>40	**19**	18	● 76
Particles >38µm	ASTM D7647	>10	**2**	0	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ **21/18/14**	▲ 21/18/14	▲ 22/20/16

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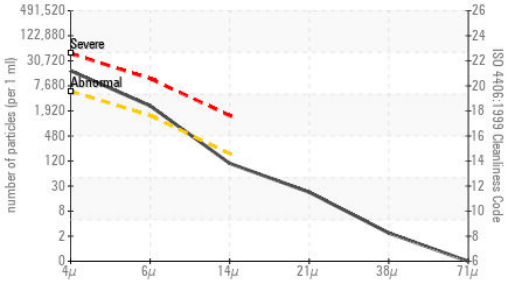
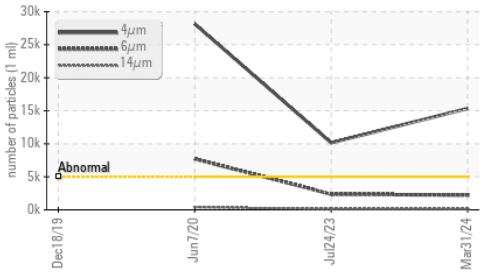
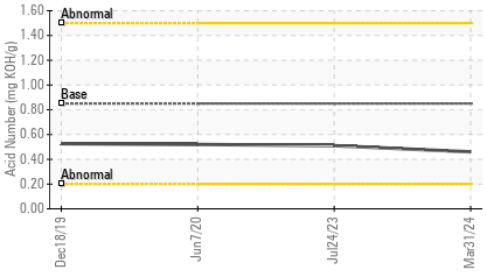
Particle Count



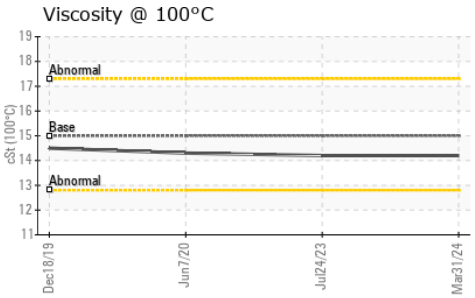
Particle Trend



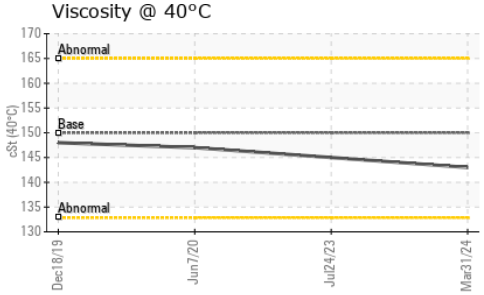
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C

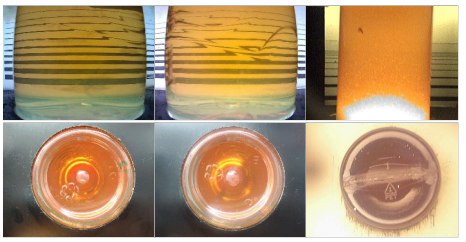


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.85	**0.46**	0.51	0.52

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**NEG**	NEG	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	150	**143**	145	147
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	**14.2**	14.2	14.3
Viscosity Index (VI)	Scale	ASTM D2270*	99	**96**	94	94

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081680 **Received** : 26 Apr 2024
Lab Number : 02631762 **Tested** : 29 Apr 2024
Unique Number : 5772915 **Diagnosed** : 29 Apr 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, TAN Man, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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